

CLAIM

1. A disk device, comprising: a swing arm which is provided with a drive unit for playing a disk and swung to insert the drive unit into a space created by splitting disk housing sections capable of housing a plurality of disks; and a drive mechanism for driving the swing arm, wherein the disk device further comprises a loading arm which is capable of being displaced between a leading position for abutting on a disk moving between a disk insertion position and the disk housing sections and leading the disk to the disk housing section side or the disk insertion position, and a withdrawing position for withdrawing from the disk.

2. The disk device according to claim 1, further comprising a biasing member for biasing the loading arm to the leading position.

3. The disk device according to claim 1, further comprising a control member which transmits drive power of the drive mechanism to the swing arm, wherein the control member is provided with loading arm driving means for driving, in accordance with the position thereof, the loading arm to the leading position or the withdrawing position.

4. The disk device according to claim 3, wherein the control member is a single plate provided so as to be able to slidingly move, and the loading arm driving means comprises a plurality of cams provided integrally on the control member.

5. The disk device according to claim 1, further comprising

a regulating arm which is capable of being displaced between a regulating position, which is disposed between the disk housed in the disk housing section and the disk insertion position so as not to contact with the disk, and the withdrawing position for withdrawing from the disk housed in the disk housing section.

6. The disk device according to claim 5, further comprising: a control member which transmits drive power of the drive mechanism to the swing arm; and a link mechanism which interlocks the control member and the regulating arm.

7. The disk device according to claim 6, wherein the link mechanism has a slide link which is provided so as to be able to slidably move, and the slide link is provided with a pressing section which presses the regulating arm to the withdrawing position at both ends of the movement direction of the slide link.

8. The disk device according to claim 5, wherein the regulating arm comprises a rod-like regulating section which stands upright in the vicinity of the disk when located at the regulating position and falls over when located at the withdrawing position.

9. The disk device according to claim 5, further comprising a tension arm which is capable of being displaced between an abutting position for abutting on an edge of any of the disks other than the disks played or inserted/ejected, of the disks housed in the disk housing sections, and a withdrawing position for separating from the disk.

10. The disk device according to claim 9, further comprising a link mechanism which places the tension arm at the withdrawing position when the regulating arm is located at the regulating position, and places the tension arm at the regulating position when the regulating arm is located at the withdrawing position.

11. The disk device according to claim 10, further comprising a control member, which transmits drive power of the drive mechanism to the swing arm and drives the link mechanism.

12. The disk device according to claim 10, wherein the link mechanism has a slide link which is provided so as to be able to slidingly move, and the slide link is provided with a pressing section which presses the regulating arm to the withdrawing position at both ends of the movement direction of the slide link, and is provided also with a biasing section which biases the tension arm to the regulating position.

13. The disk device according to claim 1, further comprising:
a disk regulating section which is provided so as to be displaceable between a regulating position for regulating displacement of a disk housed in the disk housing section and a withdrawing position for withdrawing from the disk housed in the disk housing section; and

a control member, which comprises loading arm biasing means provided so as to be displaced by the drive mechanism and for biasing, in accordance with the position thereof, the loading arm to the leading position or the withdrawing position, and regulating section biasing means for biasing the disk

regulating section to the regulating position or the withdrawing position.

14. The disk device according to claim 13, wherein

the disk regulating section comprises:

a regulating arm which is capable of being displaced between a regulating position, which is disposed between a disk housed in the disk housing section and the disk insertion position, and a withdrawing position for withdrawing from the disk housed in the disk housing section;

a tension arm which is capable of being displaced between an abutting position for abutting on any of disks housed in the disk housing sections and the withdrawing position for separating from the disks; and

a link mechanism, which is provided so as to be driven by the regulating section biasing means, and interlocks the switching between the regulating position and the withdrawing position of the regulating arm, and the switching between the abutting position and the withdrawing position of the tension arm.

15. The disk device according to claim 13, wherein the control member is a single plate provided so as to be able to slidingly move.

16. The disk device according to claim 15, wherein each of the loading arm biasing means and the regulating section biasing means comprises a plurality of cams provided integrally on the control member.